

OXBOW “I See, I Wonder” Teacher Notes

Erosion and Topographic Maps

Grade	Standard/Element
5	S5E1 - Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.
5	S5E1c - Ask questions to obtain information on how technology is used to limit and/or predict the impact of constructive and destructive processes. (Clarification statement: Examples could include seismological studies, flood forecasting (GIS maps), engineering/construction methods and materials, and infrared/satellite imagery.)
6	S6E5d - Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition. (Clarification statement: Environments of deposition include deltas, barrier islands, beaches, marshes, and
6	S6E5e - Develop a model to demonstrate how natural processes (weathering, erosion, and deposition) and human activity change rocks and the surface of the
6	MGSE6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
Earth Systems	SES3. Obtain, evaluate, and communicate information to explore the actions of water, wind, ice, and gravity as they relate to landscape change.
Ecology	SEC5. Obtain, evaluate, and communicate information on the impact of natural and anthropogenic activities on ecological systems.
Environmental Science	SEV4b - Design, evaluate, and refine solutions to reduce human impact on the environment including, but not limited to, smog, ozone depletion, urbanization, and ocean acidification.

Main Ideas:

Destructive forces
Erosion
Elevation
Contours
Topographic

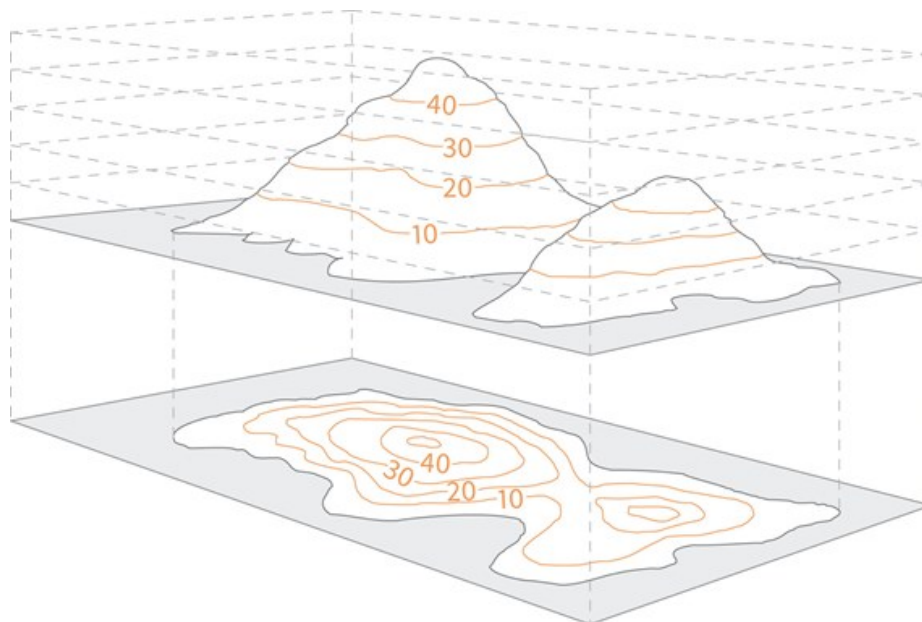
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Misconceptions:

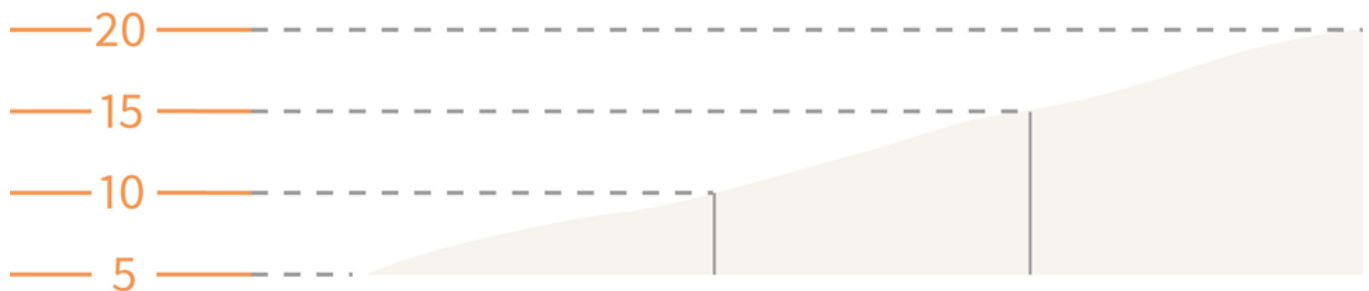
- Erosion happens quickly.
- Weather and erosion are essentially the same thing.

What You Need to Know:

- Look for the height and shape of the ground which is shown by brown contour lines. A contour is a line drawn on a map that joins points of equal height above sea level. The intervals are usually 5 or 10 feet (or meters).

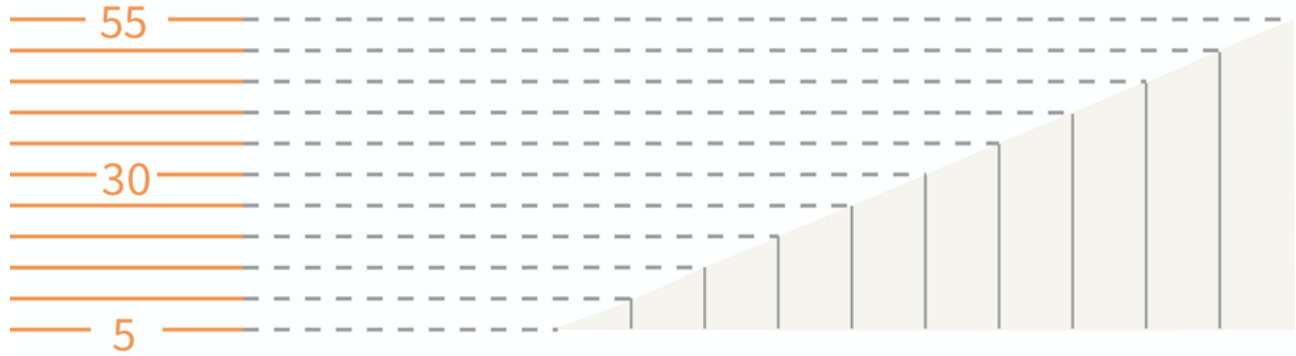


- Remember contour numbering reads up hill – in other words the top of the number is uphill and the bottom is downhill. Also remember the closer contour lines are together, the steeper the slope.
- The steeper the slope the closer together the contour lines will be.



(Shallow slope - contours are spaced well apart)

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(Steep slope – contours are close together)